

INVESTIGATION OF PRE-SERVICE ELT TEACHERS' PERCEIVED
CRITICAL THINKING SKILLS

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IN

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DECLARATION

I hereby declare that all information in this document has been Bbtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.



BAŞAK ERTURAN

ABSTRACT

This study investigated pre-service English language teachers' perceived levels of critical thinking skills at the Department of English Language Teaching at a foundation university in Turkey. The study also investigated their views regarding the impact of activities and tasks they were involved in as part of the courses they took, and of the practicum experience on the development of their critical thinking skills. Data was collected from 121 freshmen, sophomores, juniors and seniors through the Critical Thinking Standards Scale, and some open-ended questions developed for the purpose of the study. The results revealed that an overwhelming majority of the pre-service teachers, especially the sophomores, had a high level of critical thinking skill perceptions. Participants believed that among all the activities and tasks, writing self evaluations after micro-teaching, reaction to research articles and assigned readings contributed to their development of CTS the most. Besides, the seniors believed that their practicum experience that allowed them to observe experienced teachers' teaching practices in a real classroom environment and the real-time interaction with students had a significant impact on their development as teachers with a critical thinking mindset. The study discusses the importance of these findings in relation to the decisions to be made and actions to be taken in the initial English language teacher education programs.

Keywords: Critical thinking skills, prospective ELT teachers, English teaching

ÖZET

Bu çalışma Türkiye’de bir vakıf üniversitesinde İngilizce Öğretmenliği Bölümü’ndeki aday İngilizce öğretmenlerinin eleştirel düşünce becerilerinin algılanan düzeylerini araştırmaktadır. Çalışma ayrıca, aldıkları dersler kapsamında tamamladıkları aktiviteler ve öğretmenlik uygulaması deneyiminin eleştirel düşünme becerilerinin gelişimi üzerindeki etkisi hakkındaki görüşlerini de araştırmaktadır. Çalışmanın verisi, Eleştirel Düşünme Standartları Ölçeği ve çalışmanın amacına yönelik geliştirilen ve açık uçlu sorular içeren bir anket aracılığıyla, 121 birinci, ikinci, üçüncü, ve son sınıf öğrencisinden toplanmıştır. Sonuçlar, öğretmen adaylarının, özellikle de ikinci sınıf öğrencilerinin çok büyük bir çoğunluğunun, eleştirel düşünme becerisi algılarının yüksek olduğunu, ve öğretmenlik programındaki dersler kapsamında tamamladıkları tüm aktivite ve görevler arasında en çok mikro öğretim sonrası yazdıkları öz değerlendirmeler raporlarının, araştırma makalelerine yansıtıcı yazılar yazmanın, ve dersin ilgili materyallerini okumalarının kendi eleştirel düşünme becerilerinin gelişmesine büyük katkıda bulunduklarına inandıklarını ortaya koymuştur. Ayrıca, son sınıf öğrencileri, deneyimli öğretmenlerin öğretim uygulamalarını gerçek bir sınıf ortamında gözlemlemelerini sağlayan okullarda öğretmenlik uygulaması deneyiminin ve öğrencilerle gerçek zamanlı etkileşimin, eleştirel bir düşünce zihniyetine sahip öğretmenler olarak gelişimleri üzerinde önemli bir etkisi olduğuna inanmaktadır. Çalışmada bu bulgulardan yola çıkarak, İngilizce Öğretmenliği programlarında alınacak kararlar ve yapılacak aktivitelerle ilgili öneriler sunulmaktadır.

Anahtar Kelimeler: Kritik düşünme becerileri, İngilizce öğretmeni adayları, İngilizce öğretimi.

To my family.



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TABLE OF CONTENT

DECLARATION	i
ABSTRACT.....	ii
ÖZET	iii
ACKNOWLEDGMENTS	v
TABLE OF CONTENT	vi
LIST OF TABLES	viii
I. INTRODUCTION	1
1.1. Background to the Study.....	1
1.2. Statement of the Problem.....	2
1.3. Purpose of the Study	4
1.4. Research Questions.....	7
1.5. Overview of Methodology.....	7
1.6. Significance of the Study.....	8
1.7. Limitations of the Study	10
1.8. Definitions of the Terms	10
2. LITERATURE REVIEW	12
2.1. Theoretical Background for Critical Thinking	12
2.2. Definitions of Critical Thinking	15
2.3. Approaches to Teach Critical Thinking Skills.....	17
2.4. Critical Thinking in Foreign Language Learning	19
2.4.1 Techniques and Tasks to Teach Critical Thinking.....	21
2.5. The CT Studies with Pre-service Teachers.....	23
3. METHODOLOGY	28
3.1. Setting.....	28
3.2. Participants.....	29

3.3.Data Collection Instruments	30
3.4. Data Collection Procedure	32
3.5. Data Analysis	33
4. RESULTS	35
4.1.Findings of the First Research Question	35
4.2. Findings of the Second Research Question	40
4.3. Findings of the Third Research Question	43
5. DISCUSSION AND CONCLUSION.....	46
5.1. Discussion of the Findings of the Study	46
5.2. Pedagogical Implications.....	49
5.3. Limitations and Suggestions for Further Studies.....	50
REFERENCES	52
APPENDICES	63
APPENDIX A.....	63
APPENDIX B	67

LIST OF TABLES

Table.1. Total CTS scores of the participants.....	44
Table.2. Mean Scores obtained by PST at different years of study in the program.....	45
Table.3. Importance of having CTS for an English teacher	46
Table.4. Activities/ tasks that contribute to PST's CTS development.....	49



I. INTRODUCTION

1.1. Background to the Study

Prominent scholars, educators and history philosophers have been considering the significance of thinking skills for individuals to keep pace with today's swiftly changing world. Both professional and social life thinking skills guide people to keep up with new information, innovations in technology and so forth. Instead of accepting the knowledge they confront, they need to question, seek the ways to evaluate and interpret in the 21st century via critical thinking (hereafter CT). As one of the prominent thinking skills, critical thinking skills (hereafter CTS) have a leading role to accomplish them. CT is one of the fundamental features to be successful in the 21st century (Huitt, 1998). With the help of CTS, people are more successful in their educational life. Nowadays, one of the most crucial goals of the instructional system is to ensure thinking independently among learners not only in academic subject matter but also in daily life (Ennis, 1989; Grinberg, 2004; Nelson, 2004).

Undoubtedly, in the scope of education, CT is a paramount point as it promotes academic success. However, despite the increased priority on CT, it has been debated that not all learners have the abilities for CT (Crenshaw et al., 2011; Hosler & Arend, 2012). Generally, the integration of thinking skills and language is not successful in the English language teaching system (Pica, 2000). The students in all levels, have hardly any chance to practice their thinking skills in foreign language teaching . In a successful academic language teaching program, to promote CT among learners the target point of the curriculum should comprise much more than linguistic elements (Brown, 2004). Additionally, to be able to follow the continuously changing world and meet the requirements of the societies, it is necessary that rather than gathering the knowledge without thinking and questioning, individuals should analyze, evaluate and interpret it

in a logical way. Therefore, creating such opportunities in class to enhance learners' CTS are of crucial significance in higher education and in ELT. Moreover, teaching higher-order thinking skills should be involved in the L2 curriculum. The research shows that there are differences between the language learners who have CTS and the ones who do not. Those who have CTS accomplish the tasks more efficiently. There are several paramount reasons to use CTS in English language teaching (hereafter ELT). For instance, being responsible for their own thinking enables learners to control and evaluate their own learning way more effectively. CT broadens the learning insight and creates a more successful language learning process. Moreover, CT highly influences the students' success in a positive way (Rafi, 2009). Development of language and thinking are connected to each other. Educators have stated the significance of gaining higher order thinking skills in foreign language settings (Chamot, 1995; Tarvin & Al-Arishi, 1991) and provided observational evidence that stresses the necessity of teaching CTS while teaching foreign language (Chapple & Curtis, 2000; Davidson, 1994, 1995).

The current study aims to explore pre-service teachers' (hereafter PST) perceived degrees of CTS in the field of ELT in a foundation university setting. ELT instructors have the paramount role to enhance their students' CTS. To this end, they prepare lessons that involve tasks encouraging CT. Therefore, this study can be a departure point for the further studies on CT and guide the scholars, educators and PST to be aware of the significance and ways of developing CTS.

1.2. Statement of the Problem

Language learners have difficulties while using CTS because of the curriculum, the materials that are used, teachers' lack of knowledge, their way of teaching styles,

and so forth. All these factors are serious obstacles for the learners to think, analyze, evaluate, interpret and have a different perspective. Moreover, not having a suitable setting for practicing their thinking skills is another problem. All of them prevent their academic success. It is even more significant for PST as they are the leaders to guide the learners to get and apply CTS. That's why they have to get a high quality education in CT. Teachers are responsible for helping students get, categorize, criticize, introduce and apply the knowledge. However, to be able to help students, teachers themselves should be well-trained in thinking skills.

In developed countries, the educational system is given utmost significance. In these countries, teachers are well-educated, have many opportunities to improve themselves and follow the latest trends in education. They are aware of the fact that without teachers that are well-trained, they cannot have a contemporary society. However, in some countries there are some problems in education in terms of applying CTS. For instance, traditional ways of teaching based on rote memorization and inactiveness of the learners and extensive coverage of content prevent the learners from gaining CTS. In a study conducted in Indonesian context, learners were found to have difficulties in comprehending difficult words of questions, thus, teachers needed to repeat their questions to explain the meaning or translate it into Bahasa and Indonesia (Matra, 2014). Moreover, students' lack of abilities to ask questions, think, analyze and interpret the knowledge were found to be the barriers for CT.

In today's education system, teaching how to think is the primary element missing. Even though lots of new reforms and developments have been introduced in education all around the world, the percentage of teacher-centered classes is very high. There is no interaction between teachers and students. Instead of asking questions, learners focus on memorization. They cannot answer the questions which include

different knowledge and information from their course books. When teachers ask questions, students generally wait for only a couple of seconds before responding to their own questions (Paul, 1990). He emphasizes that knowing means to remember so that when learners can repeat what the instructor said or written in the text, they are thought to be knowledgeable. One of the other problems is traditional teaching methods such as giving fundamental rules, formulas, forcing the students to memorize and looking at one side of a situation are taught the appropriate ways of teaching by the majority of teachers.

CT is essential in reading, note taking, writing, and in presentations. For this reason, it needs to be introduced to learners by giving them the opportunity to practice and share their opinions. Teachers are the role models to introduce CTS to the learners. They are responsible for designing activities to foster CT in their lessons. Therefore, PST should be trained in educational faculties to meet the requirements of CTS. CT is a type of education in which learners are instructed to raise questions to think about what they learn, to try to use their new ideas into new circumstances, to see the differences between their own ideas and their course books, and to be capable of discussing what they are learning into small learning groups (Paul, 1990).

1.3. Purpose of the Study

Teachers who are competent in teaching CTS by using suitable techniques and strategies are the fundamental factor to develop learners' CTS. Therefore, the chief aim of the current study is to investigate the perceived CTS level of PST who are enrolled in the ELT program of a foundation university in Turkey. The study also aims to investigate how they perceive the contribution of tasks and activities they were engaged in their teacher education program to the development of their CTS.

CT is accepted as one of the core skills to teach in the Turkish primary school curriculum (Curriculum Handbook, 2005). Especially in ELT, the learners who are taught in traditional ways face a great obstacle in terms of applying CTS during the learning process. For instance, rote learning requires listen-and-repeat patterns that do not have any element of CT and at beginner levels the target is merely learning a basic vocabulary to use. The thing is, when learners face any task using the target language that includes the components such as, analyzing, searching, thinking, and problem solving then they need to think critically. In contemporary language teaching, these components are used especially in communicative activities along with CTS to create a meaningful learning process. Moreover, the effective language classroom gets the benefits of authentic and real texts which have been adapted for the language level. These texts have the elements of writer's or speaker's intended meaning. When the students face this kind of a text either in spoken or in written form, they need to understand the meaning, analyze the thought, find the supporting proof and finally express their own idea about the text. All these can be achieved by thinking critically. There are many materials in language teaching. Since CTS fosters effective language learning, the importance of the materials that have the components of CTS are increasing day by day. Therefore, ELT teachers need to be competent in CTS to evaluate the appropriateness of them in every respect.

According to educators, in some educational systems, learners do not have enough time to go beyond the primary requirements of the curricula and examination demands. The thing is, in that case those who have a high level of CTS are more successful than the ones who do not. For instance, especially in widely-taken exams, in speaking and writing parts, participants are required to answer the prompts with ideas and supporting reasons. In writing parts, they are responsible for explaining their

thoughts by writing an essay about a title. In addition to these, they are expected to show their English level and get points for presenting an idea based on three reasoned claims in a clear and coherent organization. All of them can be achieved by developing CTS. One of the other examples is, especially in some widely-taken speaking exams, students discuss an issue and make a common decision. Then the student asks the other participants where the target point is on clarifying and justifying ideas. At the end of the exam, the participants who show a great performance in English both receive points and are rewarded for their opinions and plausible ideas. All the stages in the exam can be successfully completed by the ones who have developed a high CT level. Together with these, since CT is paramount for tertiary education, it is a chief study at universities. The students who plan to continue their studies at university are expected to be well-educated in English language. As universities lead their students to be independent learners by having the ability of defending a claim not only presenting the supporting proof but also creating their own strong arguments, CT is the must element. Therefore, it is clearly understood that developing CTS at an early age is a great advantage for the students to be successful at tertiary education.

Having said these, it is undoubtedly clear that ELT teachers who will teach at a variety of grade levels from kindergarten to university preparatory schools are responsible for teaching the language effectively by guiding the learners to enhance their CTS. However, what needs to be posed at this point concerns the CT levels of teachers themselves, and what their initial teacher education programs do to develop prospective teachers with CTS. Therefore, the present study was inspired to explore PST' perceived levels of CTS to bring this significant issue to the attention of teacher trainers, teacher education programs, and program designers to train prospective

teachers adequately by including the activities and tasks that are perceived to contribute to their development of CT mindset.

1.4. Research Questions

The present study addresses the following research questions:

1. How do PST perceive a) their current levels of CTS and b) the importance of CTS for language teachers?
2. What kind of activities and practices PST get involved in as part of their initial teacher training do they think contribute to the development of their CTS?
3. Do PST think their practicum experience improves their CTS? If yes, how?

1.5. Overview of Methodology

The data was collected through two instruments one of which was developed for the purpose of the study, and the other Critical Thinking Standards Scale (CTSS) developed by Aybek et al. (2015). The former involved some questions to collect participants' demographic information, and some open-ended questions and a likert type question to find their perception of CT and of the activities and tasks they were involved in their program which they perceived to be contributing to the development of their CTS. Responses to the open-ended questions were analyzed qualitatively while responses on the likert type question were tabulated in terms of the number and percentages of participating PST who evaluate the tasks and activities in terms of their contribution to the development CTS.

The second instrument, Aybek et al.'s CTSS included 42 items grouped under three subscales: Depth, width and competence subscale with 18 items (items 1-18), precision and accuracy subscale with 12 items (items 19-30), and importance, relevance and clarity subscale with 12 items (items 31-42). This instrument is a five point Likert-

scale with points ranging from 5 *strongly agree* to 1 *strongly disagree*. After reverse scoring some of the items, the total scores of the participating PST were calculated to find their perceived CTS levels, and descriptive statistics were used to show the mean scores obtained by PST at different years of study in the program.

1.6. Significance of the Study

It is necessary for societies to educate individuals who can meet the requirements of the modern world. To illustrate, in language education, a variety of new materials and applications are introduced to students and educators at a very fast speed. Since these materials make the learning process more interesting, different, quick and permanent, learners and educators prefer them to the traditional ones.

All around the world, especially developed countries, allocate the majority of their budgets to education. In accordance with the needs of the students, they design the schools, provide up-to-date materials, and educate teachers to use the new approaches and trends while teaching. Therefore, teachers have the key role as they are the leaders to shape the societies with their ways of teaching. Therefore, it is obvious that teachers should be competent in educating the individuals in the most effective way. As commonly acknowledged, CTS is the most paramount 21st century skill that every individual is expected to master. That is to say, instead of learning and accepting a new concept without questioning, it enables individuals to think thoroughly, question critically, and reflect to evaluate, analyze, criticize, interpret, determine, shape his/her own idea, and explore the best way for oneself to learn. As in many fields, mastering all these skills are of great importance in ELT since learners with higher levels of CTS are more successful than those with lower skills in the language learning process, e.g. in writing as shown by Jodeiri (2005).

However, teaching of CTS to students at all levels may be quite challenging for the teachers. First of all, teachers who are supposed to train students with high CTS may themselves lack this significant skill and this creates differences in terms of understanding and teaching CTS among instructors (Meiramova, 2017). Second, even if they are critical thinkers, they may not be competent enough to teach CTS to their students with the right methods and approaches. In other words, they may not have the right pedagogical knowledge to teach CTS with the most appropriate techniques. As a result, they may not design appropriate lessons with the most efficiency.

One way to ensure that prospective teachers have CTS and the knowledge of teaching them as part of their pedagogical knowledge is to have courses on CT and specifically designed CT activities integrated into many courses offered in the teacher education programs. Yet, not all programs may involve such courses to promote CTS of prospective teachers.

In the ELT programs it is often emphasized the importance of CTS to make the language learning process easier and more efficient. However, the degree to which these programs are based on the idea of developing a critical thinking mindset remains underexplored especially within the Turkish context of tertiary education. Therefore, this study intends to explore how prospective English as a Foreign Language (EFL) teachers perceive their CTS and what they believe contribute to its development. From this point of view, the present study unveils what is done and not done for the sake of developing CTS in a four-year ELT program at a foundation university. The findings have implications regarding the necessity of raising CT awareness; understanding the role of teacher trainers and ELT teachers in developing critical thinkers; and acknowledging the necessity of integrating CTS-boosting activities, courses, and tasks into teacher training programs.

1.7. Limitations of the Study

The current study is limited to the data gathered from the PST enrolled in the ELT program in a foundation university in Turkey. Other ELT programs both in state and foundation universities were not included in the study. Therefore, the results can be generalized by no means to the contexts of other universities in Turkey.

This study used the scale developed by Aybek et al. (2015) to investigate the PST' perceived levels of CTS. Even though the literature comprises various sub skills of CT, the scale used in the study has merely three sub categories. Therefore, the results of the present study should be evaluated considering the definition of CTS underlying the instrument used to collect data.

The scale data also has its own limitations as it only reveals the perceptions of the participants. In this study, PST' perceived levels of CTS were found, not their actual levels of CTS. It is possible that they gave answers that they thought would be socially acceptable. Therefore, the perceived level is not the indicator of the actual level. Besides, the data comes from only one participant group, i.e. the student in the ELT program. Data to be collected from teacher trainers would enable a deeper understanding of the issue.

1.8. Definitions of the Terms

Critical Thinking: CT involves comprehending, and assessing different viewpoints, and solving problems (Maiorana ,1992). It requires asking questions, trying to reply to those questions by reasoning them out, and believing the outcomes of our reasoning (Nosich, 2009).

Critical Thinking Skills: CTS are a diversity of skills such as describing the origin of the information, analyzing its plausibility, stating whether that information is

steady with their previous information, and coming to the conclusion based on their CT (Linn, 2000). Individuals with CTS question the accuracy of existing information, look at events from different perspectives, and judge situations (Aybek & Aslan, 2017).



2. LITERATURE REVIEW

2.1. Theoretical Background for Critical Thinking

CT has its origins to prominent Greek philosophers such as Socrates, Plato and Aristotle whose ideas influenced Western thought to a great extent. Reasoning based on extensive analysis and responsive oppositions appeared in the works of Aristotle (Rychlak, 1987). In other words, its conceptual roots date back to 2500 years ago. Socrates utilized a peculiar method of enquiry that individuals could not logically defend their confident arguments to knowledge. He claimed that even though the individuals have power and high status, they can be deeply baffled and illogical. His method of enquiry is known as Socratic Questioning and is the best known CT teaching design. This learning-centered technique triggers the development of CTS and analytical dialogue that ensures learning and thinking independently. Socrates emphasized the necessity of thinking for lucidity and rational consistency and laid the basis for CT tradition, which probed carefully separating opinions that are plausible from those which lack concrete proof or logical basis to support our opinions.

Plato, who recorded Socrates' thought, Aristotle and the Greek skeptics followed Socrates's implementations of CT. Socrates's most famous student Plato continued his philosophical teachings (Colaiaco, 2013). One argument they had in common was that things are frequently very disparate from how they appear to us and that a merely educated mind is able to see throughout the way things can be seen on the surface (delusive aspects) to the way they actually are underneath the surface (the deeper actualities of life). This ancient Greek thought encourages individuals to seek the deeper sides of concepts, think systematically, follow the clues broadly, think in an extensive and well- reasoned way, and surmount the obstacles.

In the Middle Ages such philosophers as Thomas Aquinas concretized the idea of CT with their writings and teachings. Aquinas's claim describes that CT does not necessarily refuse held theological beliefs, rather it assists to refuse beliefs that lack logical foundations (Rychlak, 1987).

In the period of Renaissance in the 15th and 16th centuries, particularly, Desiderius Erasmus, John Colet, and Sir Thomas Moore continued the supposition about the primary need of searching analysis and critique about the majority area of human life. Francis Bacon's book, *The Advancement of Learning*, is one of the earliest texts in CT. His agenda was often considered as a conventional agenda of CT. Approximately fifty years later, Rene Descartes's *Rules for the Direction of the Mind* is considered the second text in CT. Descartes developed a methodology of CT based on systematic doubt through logic and reasoning. In the same time period, Sir Thomas Moore's model of a new social order, *Utopia*, and Niccolo Machiavelli's *The Prince* made contributions to the development of CT.

In the 16th and 17th Century, the idea of using critical mind in every domain of life was emphasized by many philosophers including Hobbes, Locke, Boyle, Newton, Galilei, Copernicus, Kepler, Bayle, Baron de Montesquieu, Voltaire, and Diderot. Diderot claimed that all authorities must agree to the examination of reasonable critical questioning (Bartlett, 2001).

In the 18th Century scholars interpreted CT in far-reaching ways. Adam Smith criticized some issues in his work entitled *Wealth of Nations* while Kant probed the reason itself in his work, *Critique of Pure Reason*. In the 19th Century, Spencer, Comte, Marx, Freud and Darwin were the leading figures whose ideas of CT affected everyday culture with all its aspects extensively, leading to the foundations of Anthropology and Linguistics. In the 20th Century, William Graham Sumner stressed the necessity of CT

in education and in all domains of life, and stated that thinking in an efficacious way is based on education and training with intellectual practice and potential.

John Dewey is known to start the contemporaneous CT movement. In his masterwork *How We Think* he analyzed what separates thinking, explicitly revealing the way of training ourselves into mastering the art of thinking and techniques of directing our natural inquisitiveness in an effective way in the face of a great quantity of information. He spread the words reflective thinking and inquiry within the domain of CT. He asserted that human beings have the capability of managing and monitoring their own process of learning. Hence, CT and/or reflective thinking were central to John Dewey's teachings. The linguistic revolution and its integration to the advancement of critical thought occurred at the beginning of the 20th Century when Ludwig Wittgenstein proposed that a cautious reasoned analysis would prevent the misuse of language.

With the contributions of these thinkers and their followers, hence, the idea and importance of CT has flourished in various major disciplines to a considerable extent. Today, parallel to the advancements in technology, CT as a concept has been reframed in countless fields on every passing day.

CT is based on three separate paramount academic strands: Philosophy, psychology and education. There are two chief disciplines that form the theoretical basis for CT: Philosophy and psychology (Lewis & Smith, 1993). Sternberg (1986) has also noted a third CT strand within the field of education. Since these academic disciplines have different concerns, they developed respectable points of views to define CT. Besides, each approach focuses on different aspects of CT.

Firstly, the philosophical approach mainly focuses on the theoretical features of CT and specifies the qualities of critical thinkers. The philosophical approach focuses

on the optimal critical thinkers, emphasizing on what individuals are able to achieve under the best of situations (Sternberg, 1986). Moreover, the philosophical approach has traditionally stressed the utilization of formal rules of logic (Lewis & Smith, 1993; Sternberg, 1986). Besides, the researchers of philosophical approach reveal qualities or standards of thinking. Secondly, the cognitive psychological approach emphasizes the skills of critical thinkers, their thinking processes, actions, behaviors and the appropriate situations for them to think critically. Cognitive psychological approach defines CT by including a group of skills or processes achieved by critical thinkers (Lewis & Smith, 1993). These skills involve seeing different aspects of an issue, being open to new proof that informs ones' thoughts, reasoning objectively, inferring consequences from existing realities, and solving problems (Willingham, 2007).

For this reason, like the supporters of philosophical approach, they do not concern the features of a critical thinker or describe the characteristics of good thinking. Therefore, the cognitive psychological approach is at variance with the philosophical approach in these two ways. Thirdly, the educational approach generally focuses on the experience in classroom settings and observation of the students in learning environments. The advantage of the educational approach is that it is based on the expertises in classroom setting and observing students' learning processes, dissimilar to the philosophical and the psychological school of thought (Sternberg, 1986). This approach has advantages for the educational practitioners. These three approaches have both supporters and opponents, but they underline the different dimensions of CT.

2.2. Definitions of Critical Thinking

CT has been defined and interpreted by countless scholars throughout the centuries since it was first introduced by Socrates. In general, CT is the ability to ask

suitable questions and analyze answers without necessarily providing options (Meyers, 1986). Ennis (1987) defines it as “reasonable, reflective thinking that is focused on deciding what to believe or do” (p. 10). CT involves a group of skills utilized by learners to take charge of their thinking procedures straightforwardly (Elder & Paul, 1994). CT is a mentally disciplined procedure of effectively and skillfully conceptualizing, exerting, inquiring, combining, and /or assessing information gathered from observation, experience, reflection, rationality, or communication, as a model to view and act (Scriven & Paul, 1987). It is thinking using assessment skills by making correct inferences to disclose the actual worth of something (Paul et al., 1997). CT emphasizes problem determination and problem solving; it is a reasonable answer to questions that cannot be responded to exactly and searches to investigate circumstances to reach a proper and valid theories or conclusions (Reinstein & Bayou, 1997). CT is the procedure of investigating and evaluating thinking with the purpose of improving it (Elder & Paul, 2010). CT includes the meticulous procedure or system of attributing rationalness to a view (Ikuenobe, 2001). CT can be referred to as a metacognitive process (Tempelaar, 2006). CT is a qualitative evaluation of thoughts by asking questions whether or not such questions are relevant (Martinez, 2006).

CT and its components were not defined until 1990 by a number of scholars who participated in the Delphi Panel directed by Facione in the USA (Facione, 1990). In order to prevent the lack of agreement between psychologists and philosophers on its definition, experts decided to define CT as a concept for use across disciplines and for everyday life. Hence, a project was launched in California in 1990 with the involvement of 46 experts, half of whom were philosophers, 20% were educators, 20% were from the social sciences and psychology and 5% from the physical sciences. Hence, in the Delphi Report produced eventually CT was defined as “Self-regulatory

judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based'' (Facione, 2013, p. 4).

Nosich (2005) emphasized the core of CT includes reflection, authenticity, the act of being reasonable, and relies on evaluative criteria. He claimed that reflection should be critical, but reflection alone is not desirable. Therefore, to be reasonable, individuals must have the ability to make reasoned judgments as to what to believe and do through critical reflection and an authentic disposition where one checks his/her biases and prejudices to fairly analyze and assess the question or problem. According to him, CT is dissimilar to just thinking. CT is thinking about real problems. Its nature emerges merely from the discussion of real problems and questions. Making logical decisions are important while transferring them to real-life situations. Rules are necessary to apply them in contexts, purposes, and practical restrictions. With the help of reasoning, individuals are able to decide the logicalness of the rules. He claims that CT includes asking questions, attempting to answer those questions by reasoning them out, and believing the consequences of our reasoning. Asking questions means asking relevant and crucial questions and being aware of the questions that should be probed. Reasoning out answers is not related to saying the first thing that comes to our mind. It needs concluding relying on reasons and giving importance to all appropriate elements. Last, believing the results means CT is not only a cognitive exercise.

2.3. Approaches to Teach Critical Thinking Skills

The importance of CTS has been well acknowledged in the field of ELT. Students' ability to use higher order thinking skills make language learning process more effective and permanent for them. However, the teaching of CTS and the methods to be used has still been an issue of debate among scholars. Besides, EFL instructors

themselves may not be competent enough to think critically, let alone the teaching of it to their students. As far as some educators are concerned, thinking is not a teachable ability as it is inborn and emerges through time and naturally develops as a consequence of maturation (Nickerson et al, 1985). They also claim that thinking is only beneficial for the learners who have a high level of intellectual capacity. These beliefs and factors may prevent some instructors and institutions from teaching CTS effectively. However, given the importance of CTS, institutions should encourage their educators to get focused on the development of their learners' critical thinking abilities so that the learners can think deeply to interpret the other aspects of issues, analyze the viewpoints of others, evaluate the credibility of the ideas put forward, and develop their own perspectives. Then what approaches underline the teaching of CTS in classroom settings?

There are three principal approaches to teach CTS: The trait or dispositional approach, the emergent approach, and the state approach (Halonen, 1995). The trait or dispositional approach emphasizes that CT is an inborn ability and people inherently develop it over time. This approach is the most traditional of all and suggests that some people are inherently better critical thinkers than the others. Supporters of this approach state that genetic factors mainly affect CT and intellectual heredity is the key point. Some researchers also agree that the environment has a paramount role in the development of CT, because individuals improve their CTS not only in formal but also in informal learning environments.

The Emergent approach, the leading figure of which is Piaget, is the most preferred one to teach CTS (Halonen, 1995). Piaget's approach to cognition emphasizes the role of the environment in shaping children's CTS. This approach suggests that the development of CT is systematic and very complex, therefore, rather than focusing on

formal instruction to teach CTS, its natural development should be encouraged. Emergent approach paved the way to the development of four other approaches. First, a general or stand-alone approach suggests that CT should be taught apart from the context as an overall subject. Second, the infusion approach claims CT should be integrated with a specific topic while teaching. Third, the immersion approach emphasizes explicit teaching of CTS. Last, mixed-methods approach suggests that learners should learn CT in a general course, and utilize their CTS in a particular context.

State approach, which originated from cognitive psychology, considers CT a separate act of behaviors. The discrepancy between this approach and the emergent approach is that the former emphasizes presenting the dimensions of CTS and pays less attention to its development. State approach guides the various skill-development strategies and programs related to CTS through formal instruction.

2.4. Critical Thinking in Foreign Language Learning

CT has a crucial place in foreign language teaching classrooms (Chapple & Curtis, 2000), and therefore, teaching CT should be regarded as one of the most significant duties of foreign language teachers. It has been suggested that for learners to be competent in a foreign language, they should use CT along with the target language (Kabilan, 2000). Language development and thinking are closely interrelated and the teaching of higher order thinking skills should be integrated into the second/foreign language curriculum. Lipman (2003) states that instructors should give more importance to enhancing learners' CT than teaching them to pass from one educational degree to the next. The role of EFL instructors is to guide their learners to learn CTS during the learning process of the language.

There are many reasons for integrating the CTS into instructional programs (Mahyuddin et al, 2004) and especially to the English language learning process. Pally (1997) states that while learning a new vocabulary in a foreign language, learners need to reflect on its usage, specify the various meanings of it and know how to use it correctly in a related circumstance. Learners refer to their CTS not only while learning the four skills (reading, writing, listening, speaking), pronunciation, vocabulary and grammar, but also complicated skills like translation and interpretation. Moreover, using CTS is fundamental in understanding the culture of language and learning the appropriate use of language in different contexts.

In language learning settings supported with the teaching of CTS, the learners can control and evaluate their learning process more effectively; language learning becomes more purposeful; and learners' success is elevated (Rafi, 2009). Numerous studies have revealed the effect of CT in promoting ESL writing skills (Rafi, 2009); language competence (Liaw, 2007); and verbal communication skill (Kusaka & Robertson, 2006). In addition to these, the learners with CTS use the foreign language fluently, can express their thoughts more efficiently, justify their ideas more critically with plausible details (Rafi, 2009), and do the tasks more successfully. Mahyuddin et al. (2004) revealed in a study that language learners who are critical thinkers are able to think creatively so as to accomplish the objective of the curriculum; make decisions and solve problems; apply their thinking skills, and comprehend language or its contexts; and become mentally, physically, and psychologically harmonious. Therefore, in a successful language curriculum, the purposes of the program should cover beyond linguistic elements to enhance CT among students (Brown, 2004).

From an early age, learners need CTS not only in the classroom settings, but also in many fields, because effective thinking is crucial to find an answer to a problem,

make well-rounded decisions, and attain the objectives. Individuals who are competent enough in these, have high motivation and willingness to succeed more in language learning. Because of its relation to quality thinking, CT enhances learners' ability to communicate with other people more effectively in multicultural contexts, and to be open-minded while analyzing new information, thoughts and decisions in a foreign language. While learning/ teaching a foreign language one needs to think deeply in the related language. For instance, one needs to analyze the similarities or differences between the mother and the target language both culturally or linguistically. Moreover, for effective language learning, learners should be active and interactive with each other. They need to practice creative dialogues and use their language abilities in real life contexts. Hence, CT has an important effect on improving the English language and to constantly use it in real-life circumstances (Butler, 2012). Therefore, critical thinkers are more successful in language usage. In conclusion, to reach the high quality in education and language learning, the integration of CT to them is essential.

2.4.1 Techniques and Tasks to Teach Critical Thinking

There are some effective techniques and tasks that are used commonly by the instructors who aim to teach CTS. These tasks improve different aspects of CT, and therefore their integration to the curricula is the key point for teaching CT effectively.

One of these techniques is classroom dialogue and questioning. The latter is crucial in teaching, evaluating learners' comprehension and the students' achievement. Instructors ask hundreds of questions a day in the classroom environment, and majority of the questions are remembered (Cotton, 1988; Saeed et al., 2012; Tienken et al., 2010). Thus, tens of thousands of questions are asked in one classroom in a year, and this motivates thousands of learners to develop higher order thinking skills. Effective

questioning needs structured lesson plans and intensive integration of interaction. Higher level of questioning fosters the CT of the learners because it enables them to criticize, analyze, assess, apply and interpret, but lower level of questioning is simple to ask and does not motivate learners to develop higher order thinking skills (Tienken et al., 2010). A study carried out by McCollister and Sayler (2010) revealed that instructors use questions that guide learners to use their metacognitive skills and develop tasks that provide them to assess information via collecting and analyzing data instead of memorizing and retaining factuality.

Another task to promote CT is writing assignments. Writing is an active and productive skill that reflects the learners' higher order thinking skills. Writing assignments are primary tools for learners to explain their opinions and feelings as thinking and writing are coherent and support each other. While students learn writing, they also learn thinking. Writing also reflects the level of CT as it needs thinking, well-organization of the opinions, supporting the related opinions with plausible evidence and concluding it according to all of these after gathering, analyzing, synthesizing and assessing information (Fliegel & Holland, 2011; Sharadgah, 2014). Besides, writing also necessitates complicated thinking on factors like subject, using suitable words, planning, aim, readers, lucidity, succession, unity, transcription (Koppenhaver, 2000). Therefore, to enhance CT, learners are suggested to engage in written assignments.

Classroom discussion and debates are also helpful to develop CT. Learners have a chance to express their ideas, criticize and interpret on their own. Moreover, they analyze and evaluate both their ideas and their peers. Sharing their ideas improves collaboration, their self-confidence and motivation and these are the essential factors while teaching CTS. In these kinds of activities, teachers can present the topic or students can choose by themselves. Nowadays, understanding notions, opinions, and

knowledge via discussion or debates are used even more often than before as effectual learning needs to be able to reason, discuss, think, and make decisions independently. Discussing controversial topics in the classroom atmosphere develops reflection, logical judgment, and enables the learners to evaluate other ideas that are necessary for CT. Debates also enable the active participation of learners by placing the responsibility of understanding on the shoulders of the learners (Snider & Schnurer, 2002). Besides, as reflectivity is a significant requirement and component of CT, reflective tasks like self-and peer-evaluations also promote CTS to a great extent (Lee, 2008; Moon, 2009). Reflection on teachings through these tasks lead to new learnings.

2.5. The CT Studies with Pre-service Teachers

Critical thinking literature is replete with studies conducted with PST. Tanriverdi et al. (2012) examined current teacher education curricula based on PST' thoughts about the development of CTS. The participants were 44 PST enrolled in the senior class at a state university. The findings revealed PST' belief that CTS must be integrated into all courses, as such courses based on analysis foster their CTS. One of the main results of the study is that the instructor is the most crucial factor to teach CTS. An appropriate learning setting and an instructor with suitable beliefs allow learners to improve their CT.

In their study, Karabay, et al. (2015) focused on teachers' perceptions about their self-efficacy on critical reading. Data were collected from 594 PST from various departments and grade levels at a state university. The findings revealed that critical reading self-efficacy perceptions of PST are above the intermediate level and their self-efficacy perceptions vary according to their genders, graduate programs and academic

achievements. However, their critical reading self-efficacy perception levels do not vary according to their grade levels.

Bedir (2019) conducted a study to investigate the beliefs and perceptions of PST on 21st century learning and innovation skills with a particular emphasis on critical, creative thinking, collaboration and communication skills, namely 4Cs. The participants were 124 PST in the department of ELT of a state university. The findings revealed that PST mainly perceived 21st century learning as the integration of technology into classroom teaching. They were also moderately aware of and involved in 4Cs though they had highly positive perceptions of them. The words and phrases they used for the definition of critical, creative thinking, collaboration and communication were associated with the ones used in the educational context although 21st century skills may have different or specific meanings in different contexts.

Akinoğlu and Karsantik (2016) focused on PST' opinions on teaching thinking skills. The participants were 134 senior PST from pre-school education, ELT and primary mathematics education departments at a state university. The participants of the study thought that thinking skills could and should be taught as of preschool level. They stated that a mixed approach that combines both subject and skills based approaches is the most useful approach to teach thinking skills. They stated that teachers' and administrators' modeling were considerably important in thinking-friendly classrooms and schools. Being open to different opinions was the most important attribute of teachers who promote thinking. PST perceive themselves partially competent in developing students' thinking skills in the future. However, they emphasized the need for training in teaching thinking skills at schools.

Gashan, (2015) aimed to explore PST' knowledge about the general concepts of CT, as well as its components. In addition, the study explored their perceptions about

CT and its teaching in classrooms with an aim to improve learning and teaching process. The participants were 29 PST enrolled in a teaching program at a state university. The findings revealed that PST perceived themselves as not competent enough in CTS. However, they were aware of the importance of teaching CT. They emphasized that CT improves learners' higher order thinking skills and encourages them to become open-minded thinkers and efficient learners. They asserted that these skills enable learners to become more successful in academic life by providing them with a better comprehension of course contents and appreciation of the learning procedure.

Çakıcı (2018) aimed to find out the possible relationship between metacognitive awareness and CTS in a foreign language learning context. In addition, this research aimed to probe the effect of gender and years of PST on the relation between metacognitive awareness and CT abilities. The participants were 218 PST enrolled in ELT at a state university. The results of the study revealed that there was a crucial connection between PST' metacognitive awareness and CTS. Those with high metacognitive awareness also had high CT levels. Besides, the results revealed strong relation between the years of PST and their metacognitive awareness and CTS. Seniors were found to be more metacognitively aware and critical thinkers than the others.

Cansoy and Türkoglu (2017) conducted a study with 519 PST studying at a state university to examine the relationships between the CT disposition, problem-solving skills and self-efficacy beliefs. The results of the study revealed that PST had low levels of CT dispositions, moderate levels of problem-solving skills, and adequate levels of self-efficacy perceptions. The CT dispositions and problem-solving skills revealed significant positive correlations with all dimensions of teacher self-efficacy. An important finding is that CT dispositions and problem-solving skills were positive and

significant predictors of all sub-dimensions of teacher self-efficacy beliefs, namely of classroom management, instructive strategies and learner engagement.

Orszag (2015) aimed to investigate the skills and dispositions learners feel capable of, and explore whether there is a relationship between learners' self-reported CT ability and some variables like gender, age, years spent in university, and the significance attributed to CT. In addition to this, he aimed to find learners' thoughts about CT and to describe activities that promote their CT. The participants were 24 PST studying at a state university from different faculties such as education, humanities, business, information technology, and sports and health sciences. The results indicated that PST have a self-confidence in their critical reading ability however, their point of views of the skills and dispositions that comprise CT are quite limited. PST stated that reading and social interaction are the crucial factors to develop their CT. The results suggest that an infusion method that emphasizes field- specific subject matters and utilizes activities that clearly address different elements of CT, can raise awareness of CTS and dispositions. In addition to these, the results revealed that using dialogic teaching methods and strategies that use the effect of meaningful talk can promote learners' CT ability.

In their study, Syahrial, et al. (2019) aimed to explore whether the inquiry learning model applied by ethno constructivism modules with traditional print teaching materials used in lectures promote learners' CTS in learning or not. The participants were 64 sixth semester elementary school education PST studying at a state university. As a teaching method inquiry-based learning uses problem-solving in learning by engaging learners in the learning process. The findings revealed the impact that the inquiry model with ethno constructivism had on PST' beliefs about cultural values.

In their study, Khalid, et al. (2021) focused on PST' thoughts about obstacles to their efforts to improve CTS in classrooms and probable resolutions to overcome these perceived obstacles. Participants of the study were third- and fourth-year 22 PST at a state university. The findings revealed that issues including teacher readiness to evaluate learners' CTS, insufficient background knowledge on CT, and lack of suitable resources appeared as obstacles to improve CTS in classrooms. The study proposes changes in teaching methods courses in teacher preparatory programs and changes in thoughts about CTS as probable measures to foster CTS in the classroom.

In the light of all these, the present study investigates the perceived CTS levels of PST who are enrolled in the ELT program of a foundation university in Turkey. Additionally, the study explores how they perceive the contribution of tasks and activities engaged in the initial teacher education program to the development of their CTS.

3. METHODOLOGY

This chapter involves the design, participants, setting, data collection tools and data analysis. The study addresses the following research questions:

1. How do PST perceive a) their current levels of CTS and b) the importance of CTS for language teachers?
2. What kind of activities and practices PST get involved in as part of their initial teacher training do they think contribute to the development of their CTS?
3. Do PST think their practicum experience improves their CTS? If yes, how?

3.1. Setting

The study was conducted within the context of an initial teacher education program in ELT at a foundation university. It is a four-year program embodying intensive courses, both theoretical and practical. Since the medium of instruction is English in this university, all students, including ELT students, are required to take a proficiency exam to determine their level of English before they proceed to their faculties to master their area of studies. Those who fail in this exam are required to continue language preparatory school for one to more years depending on their proficiency levels.

In the ELT program, while PST take courses on English composition and oral communication to polish their English language skills during the first year, they take both theoretical and skills-based courses during the upcoming years, which provide them with multiple opportunities to prepare and implement lesson plans as part of the required micro-teachings. During the final year, the PST are placed at practicum

schools at the beginning of the Fall semester so they can make task-based observations in real K-12 classes throughout the year. In other words, they observe and evaluate in-service teachers' teaching practices as well as the other dynamics of the real classrooms. These prospective teachers also make teaching practices by preparing their own lesson plans with age-and proficiency-appropriate authentic materials under the supervision of their university supervisors and cooperating teachers at practicum schools. Both these teachings in real classroom settings in practicum and the micro-teachings in their skill-based courses are followed by the evaluation and feedback sessions both with their trainers and peers, and finalized with PST' reflective and self-evaluative reports on the strengths and weaknesses in their teaching.

3.2. Participants

Data were gathered from 121 PST enrolled in the B.A program in ELT. Of 121 PST enrolled in ELT program, 33 (27,3%) were freshmen, 21 (17,4%) were sophomores, 31 (25,6%) were juniors, and 36 (29,8%) were seniors. Of these participants, 93 (76,9%) were female while 28 (23,1%) were male. Their ages ranged from 18 to 36. Forty-one (33,9%) were between 18-20 years old, 68 (56,2%) were between 21-23 years old, 4 (3,3%) were between 24-26 years old, and 8 (6,6%) were older than 27 years old.

The demographic section of the questionnaire also involved questions like the type of high school they graduated from, and whether they attended preparatory school before starting the program. Seventy-eight (64,5%) of all participants graduated from state high schools and 43 (35,5%) from private high schools. Sixty-eight (56,2%) of them had language preparatory before starting the ELT program, whereas 53 (43,8%) of them did not. Twenty-two (18,2%) of these participants had spent one-semester at university preparatory school, while 32 (26,4%) two semesters, nine (7,4%) three

semesters, and five of them (4,1%) had four semesters. 44 (36,4%) of them had courses in ELT program that require them to do observations at schools as part of practicum.

3.3. Data Collection Instruments

Both quantitative and qualitative data was collected through two instruments: The first one was a questionnaire developed for the study and involved two parts followed by some brief information about the purpose of the study, an assurance of privacy, and a statement of consent asking for volunteer participation of the PST (See Appendix A). The first part of the questionnaire involved demographic questions on PST' background like their age, gender, year of study in the program, whether or not they had language preparatory classes, and the type of school they attended previously. The second part, however, involved some open-ended questions about their perceptions of CTS and likert-type scale on which they evaluated the contribution of the activities and tasks they were engaged in ELT program to the development of their CTS.

The second data collection instrument was CTSS developed by Aybek et al. (2015). This scale aimed to measure the CT standards for PST (See Appendix B). Items that are connected to CT standards were created based on Nosich's theory (2011). These standards are: Clearness, accuracy, importance/ relevance, sufficiency, depth and breadth, and precision. In the standard of clearness, it is important for the idea to be explained explicitly, comprehended easily, not to be misunderstood, to be explained in detail if it is necessary, to be concreted with examples, to be supported with visuals, and to be simple and understandable. In the standard of accuracy, it is important for the idea to be accurate and sensible. In addition to these, it is necessary for the information given to be reliable, to be presented in the correct order, to base on reliable sources and to state the truth. In the standard of importance /relevance, it is important to emphasize the crucial points while conveying the thoughts, to focus on the significant ideas, having

a relationship between the issues that are spoken and to concretize the fundamental points of the thoughts. The standard of sufficiency concerns the necessity to convey the thoughts inclusively and thoroughly with a sufficient number of examples. Besides, adequate time and evidence must be presented. In the standard of depth and breadth, the reasons for the issue must be explained in detail, deep knowledge about the issue must be given and the subject must be looked at from different viewpoints. Finally, according to the standard of precision, the issue must be conveyed faultlessly, there must be certainty in the thoughts, the issue must be detailed enough and the reasons for the events must be explained. Each of these standards define the dimensions of CT.

This instrument has 42 items on a five-point Likert scale with three dimensions. *Depth, width and competence* dimension has 18 items (items 1-18), *precision and accuracy* dimension has 12 items (items 19-30) and *importance, relevance and clarity* dimension has 12 items (items 31-42). All these dimensions reflect the elements of standards of CTS. The first dimension, *depth, width and competence* involves statements regarding PST' ability to think from different perspectives and in detail, analyze adequately, offer different options, support ideas with proofs, consider many factors before adopting an idea, investigate whether there are other subtopics under a topic, learn the basic and most important points, ask questions, do research on a topic, consider feedback about their thoughts, give enough time to others to express their ideas, and compare ideas. The second dimension of *precision and accuracy* involves statements regarding PST' ability to question an opinion's accuracy and truthfulness, use multiple disciplines to form a thought, and be open-minded to other views but with a questioning mindset. The third dimension of *importance, relevance and clarity*, on the other hand, involves statements regarding PST' ability to state their purpose clearly,

develop reasonable thoughts, support their ideas, respect others' thoughts, and ensure their thoughts are conveyed correctly.

Exploratory and confirmatory factor analyses have been principally conducted by the authors for the construct validation of the instrument. Factor loadings designed to measure each factor consistently range between .35 and .78. Item correlations ranged from .07 to .71. The three dimensions accounted for 35.96% of the total variance. Cronbach alpha values of the dimensions were as follows: depth, width, competence .89, precision, accuracy .78, and importance, relevance and clarity .63. Cronbach's alpha reliability coefficient was found to be 0.75 for the overall scale (Aybek et al., 2015).

The lowest score that can be obtained on the scale is 42 (1x42) while the highest is 210 (5x42). The scale includes 12 negative statements (*items 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30 and 41*) that are scored reversely during calculations.

The reliability of the data collected through CTSS for the present study was calculated. Optimally, the Cronbach's alpha coefficient above .7 indicates adequate internal consistency while values above .8 are recommended (DeVellis, 2003). The coefficient value was found to be .865 on this scale suggesting very good internal consistency of the data collected.

3.4. Data Collection Procedure

After receiving the approval of the university ethical board, and before the actual data collection, both instruments were piloted with five senior PST in the ELT program to check the comprehensibility and clarity of the wording of the statements. They were asked to think aloud while completing the scale and the questionnaire. Considering their feedback, verbalization of one statement in the questionnaire was

simplified to make it clear to understand for PST during the actual data collection. Next, data was collected from the PST manually by visiting their courses.

3.5. Data Analysis

In order to answer the first part of the first research question, total scores obtained by PST on the CTSS were calculated. As mentioned earlier the lowest and the highest possible scores to be obtained on this instrument were 42 and 210 respectively, the former indicating very low level of perceived CTS and the latter very high level of perceived CTS. The other scores to be obtained on the instrument were 84 (2x42) indicating low level of CT, 126 (3x42) indicating uncertainty, and 168 (4x42) indicating high level of CT. The cut off point for the determination of moderate-to-high level of CT perception was decided to be 147, i.e. the average score between 126 (3x42) and 168 (4x42). Hence, the scores between 127-147 was considered to be a moderate level of CT, scores between 148-168 a high level of CT, while scores between 168-210 were considered a very high level of CT. Descriptive statistics were also used to show the mean scores obtained by PST at different years of study.

To answer the second part of the first research question, PST' answers to the 10th question, which is a five-point scale statement, in the questionnaire were analyzed through descriptive statistics. For the purpose of calculating the distribution range, $\text{distribution range} = \text{maximum value} - \text{minimum value} / \text{Number of degrees}$ formula was used. In other words, in the interpretation of means, means that fall in the range between 1,00-1,79 was interpreted as *not important at all*, those between 1,80-2,59 as *not important*, means between 2,60-3,39 as *uncertain*, those between 3,40-4,19 *important*, and those between 4,20-5,00 as *very important* (Tekin, 1996). Besides, the

PST' answers to the open-ended part of that question was analyzed qualitatively through content analysis (Schreier, 2012).

For the second research question, PST' responses to the 11th question on the questionnaire were analyzed through the calculation of the numbers and percentages of PSTs who evaluated certain tasks and activities they were engaged in their teacher training program in terms of their contribution to the development of CTS. Finally, for the third research question, PST' responses to the open-ended 12 th question on the questionnaire were analyzed qualitatively (Schreier, 2012).



4. RESULTS

This chapter provides answers to each research question posed in the Introduction and Methodology sections, to present the PST' perceptions of their CTS levels, and the activities and tasks they were assigned in the program in terms of their contribution to the development of CTS.

4.1. Findings of the First Research Question

In order to answer the first research question, *How do PST perceive their current levels of CTS?* the total scores that the participants obtained on the five-point Likert type CTSS were calculated. The following table displays the distribution of the total scores by the number and percentages of PST who obtained them.

Table 1

Total CTS scores of the participants

Score Range	42-83	84-105	106-126	127-147	148-167	168-210
N (%)	0	0	0	9 (7.43%)	42(34,72%)	70 (57,85%)

The total scores that could be obtained on this 42-item instrument ranged from 42 (1X42) to 210 (5X42), the former indicating the lowest and the latter the highest perceived levels of CTS. As explained before, the scores between 127-147 were determined to reveal a moderate level of CT, while the scores between 148-168 a high level of CT, and those between 168-210 a very high level of CT. As Table 1 shows, of 121 participants 70 (57,85%) obtained a score that revealed their very high perceptions of CTS. In other words, these participants perceived themselves to be with very high CTS. Forty-two (34,72%) of the participants obtained a score between 148-167

revealing a high level of CT, while nine (7,43%) obtained a score revealing their moderate levels of CT. These findings suggest that an overwhelming majority of the PST, namely 91% of all, have high to very high levels of CT, while the rest have moderate levels of CT perceptions. No PST have scored below 127 indicating low levels of CTS.

The following Table displays the mean scores obtained by PST at different years of study in the ELT program.

Table 2

Mean Scores obtained by PST at different years of study in the program

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
4 th grade	36	163,9167	12,06027	2,01004	159,8361	167,9973	133,00	187,00
3 rd grade	31	170,6452	15,92597	2,86039	164,8035	176,4869	137,00	197,00
2 nd grade	21	175,2857	14,58473	3,18265	168,6468	181,9246	157,00	199,00
1 st grade	33	172,5152	13,20540	2,29876	167,8327	177,1976	134,00	192,00
Total	121	169,9587	14,33957	1,30360	167,3776	172,5397	133,00	199,00

Table 2 displays that the mean score of sophomores' perceptions of their CTS ($M=175,28$) is the highest while that of seniors is the lowest ($M=163,9$). Sophomores are followed by freshmen ($M=172,5$) and juniors ($M=170,64$). This finding is interesting in that the expectation was seniors to have the highest degree of perceived CTS as they went through a variety of tasks and activities over the years in the program and had many opportunities to reflect on their teaching practices. This finding, however, can be attributed to the fact that perceptions may not match the realities, a limitation inherent in questionnaires as such. Besides, knowing the complexity of teaching based on their experiences during the micro-teachings and practicum, the seniors may have been more realistic in their responses on the scale.

In order to answer, *How do PST perceive the importance of CTS for language teachers?*, the participants were asked to indicate how important they think CT is for language teachers on a likert type question, namely the question 10 in the questionnaire, with points ranging from 1 *not important at all* to 5 *very important*. Table 3 below shows that 121 teachers mostly picked points *important* and *very important* with a mean score of 4,57, which is above the accepted cut off point of 4,20 revealing that they think it is of very importance for language teachers to possess CTS.

Table 3

Importance of having CTS for an English teacher

N	Minimum	Maximum	Mean	Std. Deviation
121	1.00	5.00	4,5702	,73967

The open-ended part of the same question in the instrument revealed that for PST having CTS is an essential aspect of being a teacher as it is an important way of thinking to be passed on to students. Teachers should always consider their students'

needs and follow a path accordingly by constantly reflecting back and forth on the course and lesson plan. CT makes a considerable amount of contribution to both learners and instructors in the educational life and learning procedure. Therefore, teachers should be able to critically think about what they are going to do and why. An English teacher with CT ability can best manage learning processes by finding the most appropriate learning model for their students. As teacher candidates, PST think not every individual follows the right path. In order to learn from weaknesses and find better ways of managing the dynamics of teaching, teachers, PST believe, should first criticize their own thoughts and allow others to evaluate them openheartedly.

The responses of PST also reveal that PST believe that the ability to think critically also allows for self-improvement. When teaching a language, one has to analyze various factors such as the adequacy of the technique and the materials, the structure and dynamics in the classroom, as well as the new perspectives, cultures and values to be taught while teaching language, to control their healthy progress and to make a difference. The teachers who have CTS can make conscious judgments about solutions and evaluations, are open to change, and know how to react to positive and negative situations in and out of class, because their view of language teaching is not fixed. In other words, instead of applying what they learned or know regardless of the situation of teaching, they try to understand what is really going on within the context of teaching. As one participant stated in her answer, teachers with CTS use new techniques as well instead of traditional ones to keep up with the time. This is a significant feature for English teachers since many new methods and approaches to teaching may emerge to meet the changing needs of language learners.

PST also state that the English language teachers need to be able to think in a critical way to improve themselves to be useful to the students, to set them a role model,

create opportunities to allow students to develop themselves, to be versatile, and to have a wider perspective. Thinking critically opens up their horizons and increases their possibilities in many ways. CT, which is a required skill in today's world and the 21st century as stated by one of the participants, paves the way for the ability to eliminate deficiencies.

Interaction with criticism makes progress. The individual who wants to achieve self-improvement should think and criticize. Teachers need to be able to question their own routines in classroom settings, otherwise, they'll be in the same cycle all the time and it'll make their classes boring and they get tired of their professions. (PST12).

Other reasons participants stated as to why CTS are important involved their contribution to the development of reflectivity, interpreting, and engaging. Reflectivity is important for being a teacher, both in terms of self-criticism, observing and criticizing an environment, the classes, colleagues, finding various logical solutions to existing problems and self-improvement. It helps people to raise awareness, to understand how much capacity and skill they have, and to realize themselves. Being able to explain, examine and investigate the reasons behind a subject or situation takes us away from looking at it from one side and accepting everything as we hear or think. "Seeing the negative and positive aspects of classroom events, approaching them with a curious and investigative mind takes us one step forward" states PST21. The critically thinking teacher is the one who provides the best environment for both teaching and learning. They know how to react appropriately in various situations. Therefore, they are also good at classroom management.

4.2. Findings of the Second Research Question

In order to answer the second research question, *What kind of activities and practices PST get involved in as part of their initial teacher training do they think contribute to the development of their CTS?*, data collected through the 11th question on the questionnaire were analyzed to display the number and percentage of PST who believe the degree to which a certain task assigned in the ELT program contributes to the development of CTS. The calculations are shown in Table 4. The category NA in Table 4 indicates that participating PST have not experienced those activities yet in their year of study or have not found them related to the CT.

Table 4

Activities/tasks that contribute to PST's CTS development

Activities/ Tasks	Contributes a lot N (%)	Contributes to some extent N (%)	Do Not Contribute N (%)	NA
Essay Writing	1 (0,8%)	4 (3,3%)	67(55,4%)	49 (40,5%)
Summary Writing	3 (2,5%)	23 (19,0%)	63 (52,1%)	32 (26,4%)
Speaking practices in a community	3 (2,5%)	12 (9,9%)	71 (58,7%)	35 (28,9)
Assigned readings	57 (47,1%)	8 (6,6%)	1 (0,8%)	55 (45,5%)

Micro-teachings	26 (21,5%)	10 (8,2%)	49 (40,5%)	36 (29,8%)
Lesson plan preparations	19 (15,7%)	22 (18,2%)	46 (38,0%)	34 (28,1%)
Getting oral peer feedback	0	7 (5,8%)	77 (63,6%)	37 (30,6%)
Giving oral peer feedback	0	6 (5,0%)	79 (65,2%)	36 (29,8%)
Getting written peer feedback	4 (3,3%)	7 (5,8%)	69 (57,0%)	41(33,9%)
Giving written peer feedback	4 (3,3%)	7 (5,8%)	74 (61,1%)	36 (29,8%)
Getting oral feedback from instructors	0	3 (2,5%)	92 (76,0%)	26 (21,5%)
Getting written feedback from instructors	1 (0,8%)	5 (4,2%)	95 (78,5%)	20 (16,5%)
Writing self-evaluations after micro-teaching	61 (50,4%)	13 (10,8%)	23 (19,0%)	24 (19,8%)
Instructional materials evaluation	48 (39,7%)	12 (9,9%)	17 (14,0%)	44 (36,4%)

Instructional materials adaptation	47 (38,8%)	10 (8,3%)	24 (19,8%)	40 (33,1%)
Instructional materials development	51 (42,1%)	10 (8,3%)	23 (19,0%)	37 (30,6%)
Task-based observations at practicum schools	37 (30,6%)	8 (6,6%)	22 (18,2%)	54 (44,6%)
Teaching experience at practicum schools	42 (34,7%)	7 (5,8%)	19 (15,7%)	53 (43,8%)
Self and peer evaluation reports in practicum	52 (43,0%)	9 (7,4%)	20 (16,5%)	40 (33,1%)
Getting involved in teacher research	54 (44,6%)	9 (7,4%)	19 (15,7%)	39 (32,3%)
Reaction to research articles	57 (47,1%)	11 (9,1%)	26 (21,5%)	27 (22,3%)

As seen in Table 4 above, participants believed that among all the activities and tasks they were engaged in, writing self-evaluations after micro-teaching (50,4%), writing reaction to research articles (47,1%) and doing the assigned readings (47,1%) contribute to the development of their CTS the most. These tasks are followed by getting involved in teacher research (44,6%), writing self and peer evaluation reports in practicum (43,0%),

instructional materials development (42,1%), materials evaluation (39,7%) and adaptation (38,8%). Interestingly, micro-teachings and lesson plan preparations were found to be highly contributive by 21,5% and 15,7% of the PST respectively. In addition to these, participants perceived activities and tasks such as getting written and oral feedback from instructors and peers, and giving written and oral feedback to their peers, essay writing, and summary writing as not contributing to their development of CTS.

4.3. Findings of the Third Research Question

In order to answer the third research question, *Do PST think practicum experience improves their CTS? If yes, how?*, the content of the responses obtained through the open-ended 12th question in the questionnaire were analyzed qualitatively. As seen in Table 4 above, almost 40% of the participating senior PST perceived practicum experience as important for the development of their CTS. The responses that came from seniors doing their practicum and a couple of juniors who are also enrolled in the practicum course revealed that observing teachers at different grade levels and classrooms at a variety of schools, reflecting on their teaching practices after the observations, understanding in-service teachers' perspectives, evaluating their materials, lesson plans, and tasks helped them think thoroughly about the complex issues of teaching. While preparing their own lesson plans and activities, they also had to consider the needs and the background knowledge of real students and the students of a hypothetical class, and the possible problems to be encountered during their teaching. Some of the PST stated that practicum experience and Second Language Acquisition courses among all the other courses in the ELT program enabled them to gain a wider perspective in CTS.

Although the study did not have a direct research question on the PST' conceptualization of CTS, the questionnaire involved some questions (See questions 8

& 9 in Appendix A) that asked them to define CTS and the characteristics of those with CTS. Now that they were to evaluate some tasks in terms of their contribution to the development of CTS, then we needed to make sure that their definition of what CTS involves was in fact in line with what is suggested in the literature. The PST had different points of views in terms of the meaning of CT. For instance, they emphasized that CT requires looking at something objectively and thinking both the pros and cons. It is a way of thinking about new knowledge and a situation with a skeptical eye. The participants also state in their definition that making a clear judgment by establishing cause-and-effect relationships is important for CT. Evaluating the existing situation or the idea from different perspectives and interpreting the results are fundamental. CT is a form of thinking based on reasoning, analysis and observation. It involves investigating each aspect of an issue that requires, as one participant said in his definition, “the ability of thinking about and questioning a concept by approaching it from different perspectives rather than believing and applying it directly to the situations, then developing a strategy in accordance with the conjuncture and revising it if necessary”. Hence, CT requires being able to address an issue in various ways and in order to think critically, it is necessary to associate it with other issues. Brainstorming about something by including questions such as why, how and why, rather than just thinking about it, and considering the contribution and value of that thing from all areas foster their CT. Questioning the information obtained and finding evidence for their reliability before taking them for granted is a characteristic of a critical mindset according to some participants.

The PST also had various thoughts about the personality traits of critical thinkers. They listed open-mindedness, humility, patience, frankness, creativeness, self-awareness and tolerance as the traits of critical thinkers. Being disposed to ask

questions, research, and observe objectively were also stated to be crucial. Moreover, critical thinkers have self-confidence and courage to criticize themselves when needed because self-criticizing is necessary to explore the strengths and weaknesses of one's own. For PST, critical thinkers are curious, empathetic, strategist, reflective, forward-thinking, extroverted, idealistic, hard-working and willing to follow the innovations in all fields to march with the times. Moreover, they are considerate and respectful to different ideas and against stereotypes. They share their remarks considering others' age, and background knowledge. Besides, critical thinkers must be rational, analytical, detailed and solution-oriented people.

5. DISCUSSION AND CONCLUSION

5.1. Discussion of the Findings of the Study

CTS have been widely acclaimed as the most significant thinking skills in learning. As a key component of education, particularly of language education (Wilson, 2016), CTS should be integrated in the English language teaching to foster the development of language skills (Chapple & Curtis, 2000; Davidson 1994, 1995; Masduqi, 2011), because insufficient opportunities to think creatively and critically in the classroom can prevent learners from achieving high levels of proficiency (Gbenakpon 2017; Kabilan 2000; Masduqi, 2011). In other words, it must be the teachers' responsibility to assist students to develop such thinking skills (Lipman, 2003; Stefanova et al., 2017). However, teaching CTS is a challenging issue in many contexts. Teachers' unawareness of the importance of CTS or lack of professional knowledge of how to teach these skills, lack of appropriate materials, some traditional beliefs or underlying teaching philosophies, and the obstacles encountered during the integration of CTS into the curriculum are some factors that prevent teachers from teaching CTS appropriately. Despite all these factors, it is obvious that for teachers to be able to teach CTS, they should have CTS in the first place. Even though the significance of CTS has been emphasized in English language education, little importance has been attached to the investigation of prospective ELT teachers' level and experiences of CTS. In this respect, the present study was inspired to investigate prospective EFL teachers' perceived levels of CTS and the tasks that promote these skills in the program they are enrolled in.

For the first research question, *How do PST perceive a) their current levels of CTS and b) the importance of CTS for language teachers?*, the findings revealed that, unlike the participants of Gashan's (2015) study, PST of the present study perceived

themselves as having very high to high levels of CTS. Besides, they acknowledged the utmost importance of CTS for an English teacher. The results revealed that sophomores had the highest levels of perceived CTS whereas seniors had the lowest. This is an unexpected finding as seniors' perceived levels of CTS were expected to have increased due to the diverse tasks and activities they were already engaged in throughout the years in the program, particularly the micro- teachings that promote their reflectivity and CTS. Moreover, as PST stated in the present study, their two-semester practicum experience had been an important factor to foster their CTS. This result may be explained by the fact that perceptions are not the actual levels, and questionnaires have limitations innately. Moreover, having observed and first-hand experienced the complexity of teaching in real classroom settings in their practicum, seniors might have been more realistic while indicating their degree of agreement on the statements of the CTSS.

For the second research question, *What kind of activities and practices PST get involved in as part of their initial teacher training do they think contribute to the development of their CTS?*, the findings revealed that PST found some reflective writing tasks like self-evaluations after micro-teachings, writing reactions to research articles, getting involved in teacher research, and writing self and peer evaluation reports after teaching practices, as well as doing assigned readings as contributing to the development of their CT, but not the other writing activities like summary and essay writing. These beliefs are in line with the literature that promote the use of reflective tasks at tertiary level to improve students' ability to think critically by asking questions about the learning process, to express themselves thoroughly, to develop hypothesis on what is encountered during the teachings and to solve problems (Lee, 2008; Moon,

2009). Besides, such activities foster creativity, which eventually leads to the development of critical and creative thinking.

Written assignments are also used to foster higher order thinking skills of learners as it involves organizing the thoughts, providing the coherence, giving logical examples, and finalizing the writing in a meaningful way. It was interesting that the activities that involved written rather than oral response and reaction to a paper or to a teaching were found to be more beneficial for the sake of CT. This finding concurs with that writing is often associated with the development of CT capacity in learners, which in turn leads to learners' academic success (Baron & Sternberg, 1987; Condon & KellyRiley, 2004).

Another interesting finding was that less than one fourth of participating PST found micro-teachings and lesson plan-preparations as highly beneficial to the development of CTS. In addition to these, PST also found that getting written and oral feedback from their peers and instructors, and giving feedback to their peers do not contribute to their development of CTS. However, these practices are used quite often in language teacher education programs as a reflective opportunity to talk and learn about the strengths and weaknesses of one's teaching.

For the third research question, *Do PST think their practicum experience improves their CTS? If yes, how?*, the findings revealed that PST believe that the practicum experience improves their CTS. Practicum is one of the most crucial components of teacher education that gives prospective teachers a real-time opportunity to observe what really happens in a real classroom environment. PST observe and reflect upon the different dynamics of classroom settings. Moreover, they have a chance to prepare their own lesson plans, activities, tasks and materials for different grades,

explore the authentic language use and interact with the students in actual classroom environments. Hence, by means of practicum experience, they interact with the students having different interests and viewpoints, and of a variety of age and educational and socioeconomic background and consider all these while preparing their own lesson plans. Hence, their CTS are enhanced by all these diversities.

5.2. Pedagogical Implications

The study has some significant implications:

1. Given the importance of developing a critical mindset, reflective tasks that increase PST' CTS should be integrated into the teacher education programmes. Written reflective peer and self-evaluation tasks, particularly, should always follow PST' own micro-teachings and teaching practices in real classroom settings.
2. To foster the ability to think about the different aspects of teaching, guiding questions should be given to the students in these reflective tasks.
3. The PST should be encouraged to do the assigned classroom readings regularly to understand and be prepared for discussing the viewpoints raised in these texts. Discussions and debates should involve thought provoking questions, and the reading materials and the assigned research articles should be accompanied with writing reaction papers.
4. Programs can develop a course on teacher research, as was the case within the context of this study, and equip PST with the knowledge of approaches available to them to conduct research within their future classes.
5. Materials evaluation, adaptation and development opportunities should be created for PST.

6. Teacher trainers should increase the quality of the oral and written feedback they provide with PST after their micro-teaching so prospective teachers can get the maximum benefit from their trainers' field knowledge and experience.
7. Since practicum experience has a significant role in the training of prospective teachers, this experience should be enriched more with critical thinking activities and reflective tasks.

The study also suggests that CTS should not be seen as the aim of a particular course but be integrated into all courses in the ELT programmes. School administrators should encourage teachers to design curriculum that have ample space of critical thinking provoking tasks and activities, and funds should be raised to provide them with the necessary materials.

It should also be noted that teaching CTS should not be delayed until teacher training programs, but start at early ages. Therefore, in parallel with the appropriate curriculum, experts should prepare books or materials according to the students' age and interests at all grade levels. Many teachers have difficulties in terms of reaching the high quality materials. Therefore, such materials should be made accessible to all teachers so all students can benefit from them, and teachers themselves should be provided with in-service teacher training on what activities to use and how to use them in their teaching settings.

5.3. Limitations and Suggestions for Further Studies

The study has some limitations as indicated in Section 1.7. In a nutshell, it was conducted with PST enrolled in a teacher training program at a foundation university, and some of the data was collected through a Likert-type scale. Hence, the study acknowledges the limitations inherent to scale data, namely the fact that perceptions may not reveal the actuality and they assume the honesty of participants, and the

limitations caused by a particular group of PST at a particular setting. Hence, considering all these limitations, further studies are suggested to be conducted in the teacher training programs of other universities in different cities and not only with PST but also with faculty members, teacher trainers, instructors, and administrators. The possibility that different tasks and activities might have been used by other teacher trainers, despite the similarities between the ELT curriculum in teacher training programs all over the country, will make such studies quite inspirational and contributive for the dissemination of the knowledge of training critical thinkers at universities.

The study revealed some activities and tasks that promote CTS from the perspective of PST. The real impact of these activities and tasks in CTS, however, cannot be answered within this study, nor the real CT levels of PST. Therefore, further studies can explore these issues in a variety of settings. Similarly, variables that affect PST' perceptive and actual CTS can be investigated in a variety of settings.

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APPENDICES

APPENDIX A

İngilizce Öğretmenliği Bölümü’nde Okuyan Öğretmen Adaylarının Eleştirel Düşünme Becerilerine İlişkin Algıları

Bu anket İngilizce Öğretmenliği bölümünde okuyan öğretmen adaylarının eleştirel düşünme becerilerine ilişkin algılarının araştırılacağı bir çalışmada kullanılacaktır. Anketin ilk bölümü nüfus bilimsel (demografik) bilgilerinizi ve eleştirel düşünceyi nasıl tanımladığınızı anlamaya yönelik sorular içermektedir. Cevaplayacağınız ikinci anket ise Aybek, B., Aslan, S., Dinçer, S. ve Coşkun-Arısoy, B. (2015) tarafından geliştirilen Öğretmen Adaylarına Yönelik Eleştirel Düşünme Standartları Ölçeğidir.

Anketteki sorulara vereceğiniz tüm yanıtlar sadece burada belirtilen amaçla kullanılacak, başka araştırmacılarla paylaşılmayacak, ayrıca yanıtlarınız ve isminiz kesinlikle gizli tutulacaktır. Çalışmayla ilgili sorularınız için aşağıdaki e-posta adresinden benimle iletişime geçebilirsiniz. Katılımınız için teşekkür ederiz.

Başak Erturan

Çalışmanın amacı ve verilerin gizliliği konusunda bilgilendirildim. Çalışmaya gönüllü olarak katılıyorum.

İsim:

İmza:

Bölüm I. Demografik Bilgiler

1) Cinsiyet Kadın _____ Erkek _____

2) Yaş _____

3) Ne tür liseden mezun oldunuz? Devlet _____ Özel _____

4) İngilizce Öğretmenliği Bölümü'nde kaçınıcı sınıfta okuyorsunuz?

_____ yıl _____ dönem

5) İngilizce Öğretmenliği Bölümü'ne başlamadan önce hazırlık okudunuz mu?

Evet _____ Kaç dönem ? _____ Hayır _____

6) İngilizce Öğretmenliği Bölümü'nde okullarda gözlem yapmanızı gerektiren dersler

aldınız mı? Evet _____ Hayır _____

Evet ise, bu ders(lerin) ad(lar)ını yazınız _____

7) Öğretmenlik uygulaması dersini alıyor musunuz? Evet _____ Hayır _____

PART 2:

8) Eleştirel düşünme kavramını nasıl tanımlarsınız?

9) Sizce eleştirel düşünebilmek hangi kişilik özelliklerine sahip olmayı gerektirir?

10) Eleştirel düşünme becerilerine sahip olmak bir İngilizce öğretmeni için ne kadar önemlidir?

	1	2	3	4	5	
Hiç önemli değil	☐	☐	☐	☐	☐	Çok önemli

Önemli olduğunu düşünüyorsanız nedenlerini yazınız:

11) İngilizce Öğretmenliği programında aldığınız derslerde yaptığınız aşağıdaki uygulamaların eleştirel düşünme becerilerinizin gelişimine katkılarını size verilen seçeneklerden birini seçerek değerlendiriniz. Lütfen katılmadığını uygulamalar için UD (uygun değil) seçeneğini işaretleyin.

	Çok	Bir miktar	Hiç	UD
a) Kompozisyon yazma				
b) Özet yazma				
c) Topluluk karşısında konuşma yapma pratikleri				
d) Ders ile ilgili okumalar yapma				
e) Mikro-öğretim (micro-teachings)				
f) Ders planı hazırlama				

g) Akranlarınızdan sözlü geri bildirim alma				
h) Akranlarınıza sözlü geribildirim verme				
i) Akranlarınızdan yazılı geri bildirim alma				
j) Akranlarınıza yazılı geribildirim verme				
k) Dersin öğretmeninden sözlü geri bildirim alma				
l) Dersin öğretmeninden yazılı geri bildirim alma				
m) Mikro öğretim uygulamaları sonrasında öz-değerlendirme raporları yazma				
n) İngilizce öğretim materyallerini değerlendirme				
o) İngilizce öğretim materyallerini uyarlama				
p) İngilizce öğretim materyallerini geliştirme				
q) Staj okullarında görev-odaklı (task-based) gözlemler yapma				
r) Staj okullarında öğretmenlik uygulamaları yapma				
s) Staj okullarındaki öğretmenlik uygulamaları sonrasında yazılan öz-ve akran değerlendirme raporları				
t) Öğretmen araştırmaları dersi kapsamında okullarda araştırma yapma ve raporlama				
u) Araştırma makalelerine yansıtıcı yazılar yazma				

Not: UD- Uygun Değil (Bu aktiviteleri derslerinizde henüz kullanmamışsanız)

Diğerleri:_____

12) Öğretmenlik uygulaması dersinin kritik düşünce becerilerinizi geliştirdiğini düşünüyor musunuz? Evet ise, ne yönde ve nasıl geliştirdiğini açıklayınız.

APPENDIX B

Öğretmen Adaylarına Yönelik Eleştirel Düşünme Standartları Ölçeği

	Maddeler	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
1.	Sorulara çözüm yolu ararken çok yönlü düşünürüm.					
2.	Bir şey düşünürken yeterince analiz yaparım.					
3.	Bir konu hakkında detaylı düşünürüm.					
4.	Bir konuya farklı bakış açılarıyla bakarım.					
5.	Bir konu hakkında ortaya alternatif seçenekler sunarım.					
6.	Düşünmeye yeterli zaman ayırırım.					
7.	Düşüncelerimi ifade ederken birçok kanıtla desteklerim.					
8.	Bir düşünceyi benimsemeden önce birçok faktörü dikkate alırım.					
9.	Bir konunun altında başka alt konu başlıklarının olup olmadığını araştırırım.					
10.	Bir konu ile ilgili temel ve güçlü kavramları öğrenmeye çalışırım.					
11.	Bana aktarılan düşüncelere dönüt veririm.					
12.	Düşüncelerimi aktarırken konu ile ilgili sorular sorarım					
13.	Bir konu hakkında yeterince araştırma yaparım.					
14.	Bir konuda yeterli bilgi sahibi olmak isterim.					
15.	Düşüncelerim ile ilgili dönütleri dikkate alırım.					
16.	Karşımdaki düşüncesini açıklarken yeterli zaman veririm.					
17.	Düşüncelerimi zıt düşüncelerle karşılaştırırım.					
18.	Düşüncelerimi açıklarken karşımdaki kişinin düzeyini dikkate alırım.					
19.	Bir görüşü kabul ederken sorgulamadan doğruluğuna inanırım.					

20.	Yorum yaptığım her konuda hatasız bilgi sahibi olduğuma inanırım.					
21.	Uzmanların her dediği doğrudur.					
22.	Düşüncemi belirtirken tek bir disiplinden yararlanırım.					
23.	Çevremdekiler dar görüşlü olduğumu söylerler.					
24.	Bir fikir bana göre siyah ya da beyazdır. Gri yoktur.					
25.	Sahip olduğum düşünce, inanç ve değerlerimi asla değiştirmem.					
26.	Düşüncelerimi oluştururken kaynağını sorgulamadan bilgiyi kabul ederim.					
27.	Bir konu hakkında yeterince araştırma yapmadan karar veririm.					
28.	Sevdiğim insanların düşüncelerini doğru kabul ederim.					
29.	Genellikle çok acele karar veririm.					
30.	İfadelerde mutlak gerçeğe inanırım.					
31.	İfadelerim düşüncelerimi açıkça belirtir.					
32.	Düşüncelerim akla yatkındır.					
33.	Düşüncelerimi açık bir şekilde ifade ederim.					
34.	Karşımdaki kişinin düşüncelerini önemserim.					
35.	Düşüncelerimi ifade ederken amacımı belirtirim.					
36.	Düşüncelerimi benzer/paralel düşüncelerle desteklerim.					
37.	Düşüncelerim gerçek hayata uygundur.					
38.	Karşımdaki kişinin düşüncelerine saygı duyarım.					
39.	Düşüncelerimi sade bir hale getirdikten sonra açıklarım.					
40.	Düşüncelerim başkaları tarafından genellikle yanlış anlaşılır.					
41.	Düşüncelerimi yanlış anlaşılacak şekilde aktarırım.					
42.	Düşüncelerimin doğru aktarıldığını karşımdaki insana ne anladığını sorarak kontrol ederim.					